Eötvös Loránd University

Faculty of Humanities

Doctoral Dissertation Theses

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A STUDY OF TEACHER'S TURNS IN CLASSROOM CONTEXT

The Teacher's Questioning Strategies

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1. Introduction

“Good learning starts with questions, not answers.” (G. Claxton[1]). Children know this by instinct when they make enquiries about the causes and effects of the phenomena in our world. As they reach school age, school becomes one of the most important sources in their environment of gaining knowledge and developing skills. Consequently, the right way to ask questions in the classroom, both from the student's and the teacher's point of view, plays a key role in gaining knowledge in an efficient way.

Asking questions is a universally applied activation technique in the classroom communication and is typically one of the three in the Initiation-Response-Feedback sequence (Ur, 1991 p. 228). The teacher's question is the most common form of manifestation in the classroom discourse, it is “the major pedagogic tool in the classroom” (H. Varga 1999, p. 215). Its function can be kindling, among other things, attention, sympathy, interest, good atmosphere and activity (Antalné 2006, p. 60), as well as starting, maintaining or closing a possible interaction between the teacher and the student. The answers given to the questions let the teacher know whether the material has been understood or not. Thus, the question-response method can reveal where the deficiencies of knowledge acquisition are, it can keep students motivated during learning[1], and it plays a major role in improving students' cognition (Nagy F., 1976 p. 72).

The quantity, type and layout of classroom questions have an influence on the development of students' cognitive skills and communicative competence in their native language. The teacher's classroom communication, including their questions, provides an outline. Hence, if the question types and their composition are adequate, furthermore, if through the questioning strategies a successful classroom discourse ensues, teachers contribute to the improvement of students' fundamental native-language skills directly and indirectly as well.

Researchers concerned with classroom discourse first examined the number of questions asked by the teacher, then later on studied the relation between the question types and the development of students' cognitive skills. The latter studies all showed that teachers most frequently use factual, lower-order questions in class (Almeida, 2010 in Brown & Edmondson, 1985). Considering the international researches conducted so far there is likely no significant relation between the lower-order questions and the students' performance (Marzano & Simms, 2014 p.

10). In their study Good and Brophy drew attention to that, rather than supposing higher-order questions are in all cases more effective, it is much more desirable to compare the combination of lower- and higher-order questions with the students' performance and development. If we are interested in finding the components of an effective learning process, it is worth more examining the succession of the questions, the sequences they form than the frequency of the lower- or higher-cognitive questions (Good & Brophy, 2003 p. 378).

International and domestic researches suggest the followings: in the recently dominant teaching routines it is the teachers who typically ask the questions; usually they ask more than 100 questions during a 45-minute-long class; teachers mostly use lower-order, factual questions, the purpose of which is to check the knowledge acquisition. In addition, these studies show that teachers usually do not let students think for longer than one to two seconds after the questions, that they often ask a number of questions at the same time, and that they tend to rephrase the same questions using different words. Most classes are built on the successions of IRF/IRE-sequences in which the starting element is the teacher's question. Furthermore, it is a common phenomenon that the teacher's questioning strategies do not differ depending on the students' age-group.

The speakers', in this case the teachers' strategies vary due to their dissimilar sociocultural background, teaching forms and attitude, and because of the difference in the world they know. Earlier studies have demonstrated, comparing the features of teachers' classroom talks, that there are clearly identifiable personal differences in almost every aspect of communication, however, as for the examined classroom variables (the teacher's sex, professional experience or the taught age group), in none of the examined cases were there wide discrepancies between the opposite groups. When studying teachers' classroom talk we can observe individual characteristics in almost all of the elements of classroom discourse (Antalné, 2006; Scheuring, 2011; Király, 2015a, 2015b, 2017). These results also support the idea that teachers' linguistic personalities are reflected in their classroom talk (Караулов, 1987; Олешков, 2011). Language is an index of a teacher's identity. For instance, among other things classroom instructions, phatic components or the characteristics of questions can be indices of a teacher's identity. The reason behind can be that observable phenomenon that teachers' didactic activity, hence their talk as well, are mostly driven by instinct (Buda, 1997 p. 19).

Discourse analysis is commonly divided into three categories. This study falls into the category of the linguistic and sociological approach to discourse analysis (Boronkai, 2009). The theoretical background of the research is provided by a pedagogic conversation analysis and in this case, the goal of studying classroom discourse is, by gathering information about teachers' sociolinguistic speech culture, in a narrower sense questioning strategies, to make methodological recommendations that both beginner and practised teachers can adopt in their work. The theoretical framework of the discourse analysis is occasionally complemented by grammatical, pragmatic or rhetorical observations.

2. Research goals and hypotheses

The goal of the research is to create through getting to know teachers' questioning strategies, exploring the connection among these strategic elements and through examining the individual characteristics of the questioning methods such a self-assessment tool that provides various viewpoints for the analysis of teacher talk. With this tool beginner and practiced teachers of any type of school can minute their recorded class and learn the major components of their questioning strategies utilizing the hereby introduced method. By presenting the findings, creating a self-assessment tool and offering methodological recommendations based on the research results, the goal of this research is to help in making teachers' questioning techniques and by this the learning process more effective.

Based on the earlier international and domestic research findings six hypotheses can be formulated. The first hypothesis of this research, that teachers' questioning strategies can be modelled, means that there are certain observation points, based on which the characteristic patterns, types and questioning methods of teachers' interrogative utterances can be described.

The second hypothesis is that as to the teacher's professional experience, sex or the age group they teach, there are no significant differences in the elements of classroom questioning strategies.

The third hypothesis of the study states that there are such elements of questioning strategies in the examined two teachers' nine lessons that show a considerable difference in frequency, thus,

there are statistically distinguishable individual characteristics in the usage of teachers' classroom questions.

The fourth hypothesis concerns some of the relations between the forms of class organisation of pupils and the questioning strategies. I presume a strong positive correlation between the amount of whole class work and the number of classroom questions, as well as the proportion of questions in the teacher's talk, which means the more the whole class work is used in the classroom, the more questions are asked, and the bigger the ratio of questions is in the teacher's talk.

The fifth hypothesis that assumes a negative correlation between the amount of whole class work and the student involvement enabled by the teacher's questions means that the more the whole class work is used in the classroom, the more rarely the students get involved in the learning process by being asked.

The sixth hypothesis of the research assumes a relation between the number of classroom questions and two elements of questioning strategies. According to this hypothesis there is a positive correlation between the number of classroom questions and the frequency of question accumulation and/or the frequency of questions variants. The more questions occur in the classroom, the more frequent the teacher's turns containing question accumulation are, and the oftener question variants are used.

The seventh hypothesis presumes a relation between the length of the longest questions and the amount of whole class work as well as the number of teacher's turns. So, the more teacher's turns there are and/or the more the whole class work is used in the classroom, the longer the longest questions get. On this assumption the length of the longest questions is also significant in the classroom communication, because it characterises the teacher's talk, it is one simplified representation of their questioning method.

3. Material, method and subjects

The twenty-four (on average 45-minute-long) Hungarian Grammar classes of the first research were selected by stratified sampling. The selection was based on the teacher's sex and

professional experience, as well as the age group they taught. The corpus of the second research comes from the digital recordings of fourteen (on average 45-minute-long) classes. This second study presents the questioning strategies of three classes from the first teacher (hereinafter referred to as P1), six classes from the second (hereinafter referred to as P2) and five classes from the third teacher (hereinafter referred to as P3). P1 and P2 are both female teachers of Hungarian grammar at the beginning of their careers, while P3 is a professionally experienced male teacher of Music, so reasonably, in the comparison of the questioning strategies P1 and P2's lessons could only be contrasted severally. The questioning strategies of P3's five classes are demonstrated separately from the just mentioned other two teachers'.

The ELAN 5.0.0 software was used for minuting the recorded lessons, for the segmentation of teachers' and students' turns, the forms of class organisation of pupils and the interrogative utterances, and for the data annotation. The statistical analyses (Kolmogorov-Smirnov test for normality, Pearson's correlation, Wilcoxon test, Kendall's Tau-b test) were carried out in the SPSS Statistics 20.0 software at the confidence interval of 95%.

In order to analyse the patterns the questioning strategies including the question accumulations and questions variants follow I used a coding system of my own that perceptibly shows how the consecutive questions relate to one another, whether the previous one is repeated, changes grammatically, is supplemented by another, whether the starting question is varied in form though has the same content, or on the contrary, it occurs in the opposite sense.

4. Research findings

The first research studies the characteristics, regularities and strategies of how questions are used, then with the help of the findings compares the teachers' questioning strategies based on their sex, professional experience and the taught age group. The most important findings of the first research can be summarised as follows: in the examined twenty-four classes teachers asked 196 questions in 45 minutes on average, out of which 91 were questions about the curriculum, 25 were management questions and 80 were utterances with no interrogative function, but with

interrogative form and/or intonation. The frequency of the major question types and their relations observed in the twenty-four lessons are demonstrated in Figure 1.

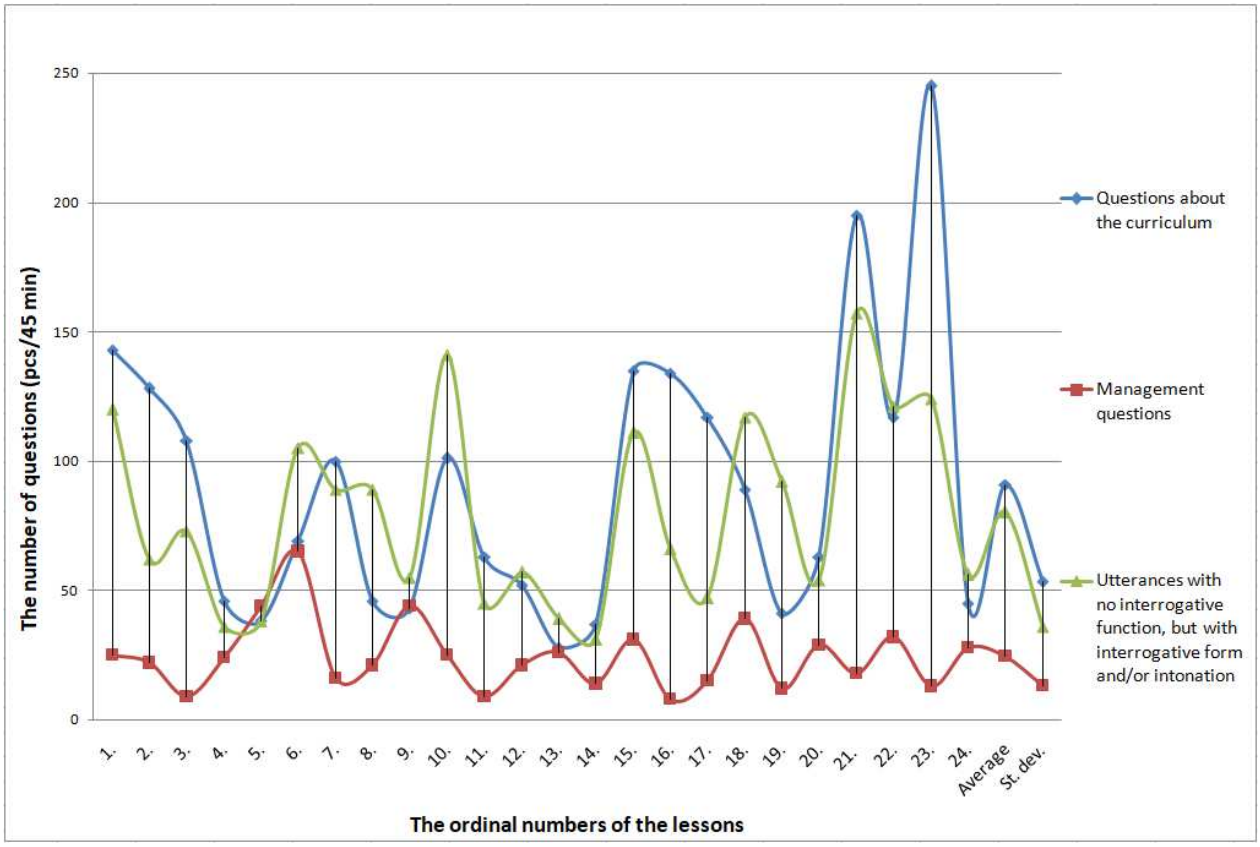

Figure 1

The number, average and standard deviation of questions about the curriculum, management questions and utterances with no interrogative function, but with interrogative form and/or intonation (pcs/45 min)

In sixteen lessons out of the twenty-four teachers asked most frequently questions about the curriculum, then used utterances with no interrogative function, but with interrogative form and/or intonation the second most often and finally management questions. Out of the three groups of questions, the questions about the curriculum showed the largest individual differences among teachers, while the management questions the slightest.

Further key findings of the first research are: on average teachers ask questions in 18.2% of their speaking time during the twenty-four lessons. The questions are around 1.9-second-long in the

examined classes. 32.7% of the turns with interrogative content had at least two questions. 34.7% of the (curriculum-related or management) pending questions are asked in the form of a question variant in the twenty-four classes. The frequency of these question variant types during the twenty-four lessons are illustrated in Figure 2.

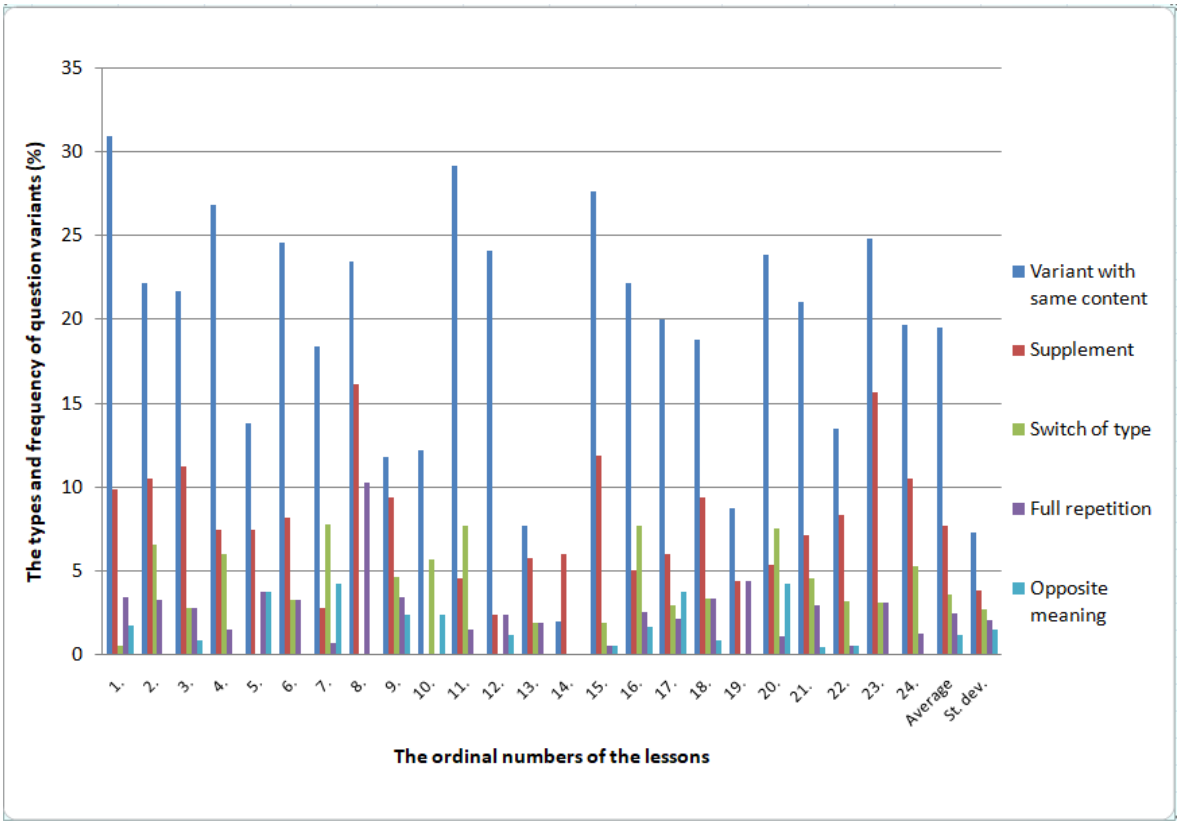

Figure 2

The types and frequency of question variants in comparison to the (curriculum-related or management) pending questions

During the twenty-four lessons when teachers ask pending questions in the form of a variant, in 19.6% of the cases they use a variant with different form, but same meaning, in 7.8% a supplementary variant, in 3.6% a different type of variant, in 2.5% a full repetition and in 1.2% of the cases an opposite variant.

In the research around 5.3% of the questions are followed by an at least three-second-long silence, namely if teachers do not get an immediate answer to their questions, they tend to take the word back after one second or two. In these cases, they either put a new question or modify

the starting question, or alternatively resume their turn with a non-interrogative utterance. This study analyses primarily teachers' communication from different aspects that the quality of the recorded lessons and the technical opportunities (a microphone is already sufficient to make a record) all render possible. However, the students' turns could not always be properly heard, and the segmentation of turns uttered during teamwork ran into technical difficulties if there was no dictaphone in close proximity to the students. Due to these limitations the average length of students' turns could only be determined in ten out of the twenty-four lessons, but since none of the questions seeking an answer was followed by an at least three-second-long silence in two of these lessons, the research analysed all together in eight lessons the average length of students' turns and in comparison the average length of turns that were preceded by an at least three-second-long wait. For the results obtained see Figure 3.

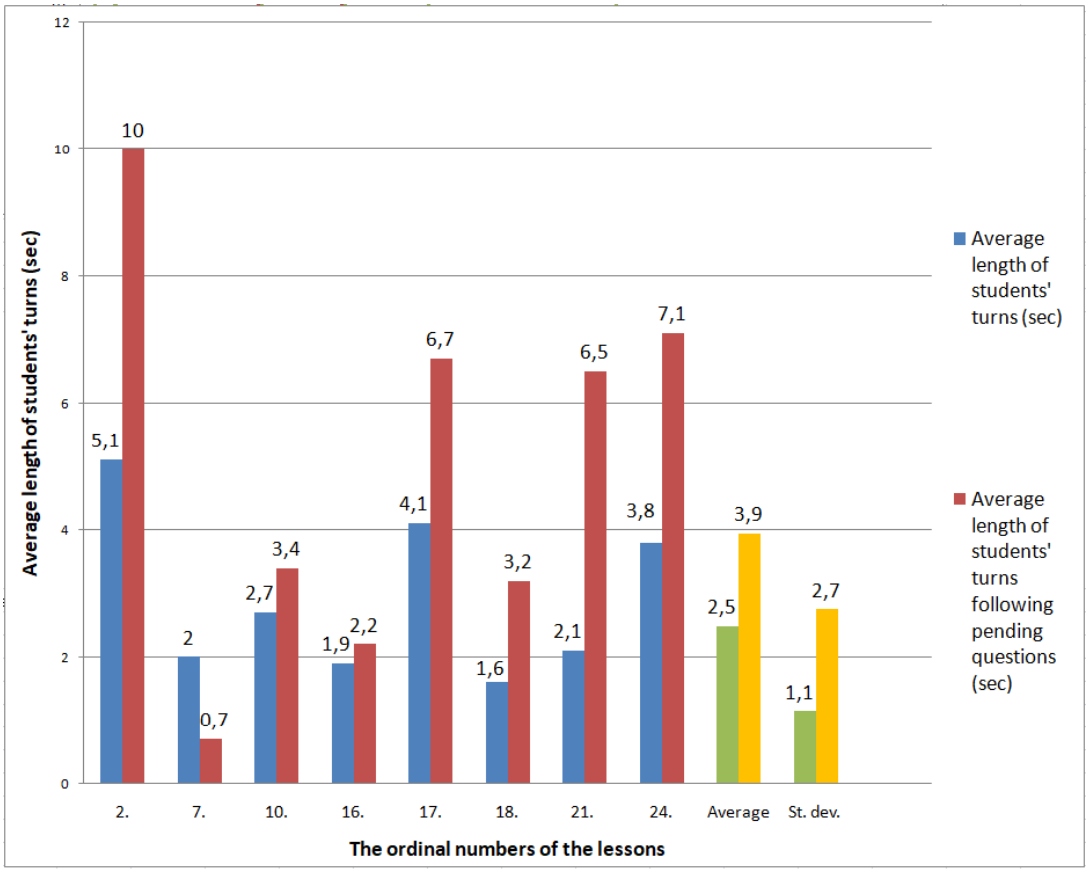

Figure 3

The average length, average and standard deviation of students' turns during the whole class and after pending questions (sec)

In seven out of the eight lessons students gave longer answers after the teachers' waits than in the rest of the class. The statistical analysis shows that there is a major difference between the two samples (p = 0.036), which means there is clear, statistically verifiable evidence that students' answers are longer than the average, if the teacher pauses at least for three seconds after their question.

Another important result of the first research is that around 14.7% of the questions about the curriculum are higher-order questions in the examined twenty-four lessons. Thus, teachers typically ask questions aiming for one correct answer, that is to say lower-order questions in the classroom. 57.2% of these questions are information questions. The two most frequently used wh-words in information questions are: *what kind of/how* and *what*. 10.4% of the pending questions contain some sort of polite language form. The teachers involve around 73.7% of the students in the learning process during the whole class work of the twenty-four lessons.

The second part of the first research studies the relations among some of the key features of communication and the elements of questioning strategies, for example if there is any correlation between the amount of teacher's talk and the number of questions, or how the amount of whole class work and the number, length etc. of the questions are connected. While having examined correlations among the elements of questioning strategies several evident and many unanticipated relations came to light. These correlations at the time of designing the research were not yet in the foreground, thus they are not hypothesized. One of these results is that there is a fairly strong correlation between the following strategic elements: the amount of teacher's talk and the amount of teachers' turns with question accumulation (r^2 = 0.443, p = 0.030). In addition, there appears to be an indeed strong positive correlation between the amount of questions in the teacher's talk and the frequency of question accumulations and a moderately strong one between the same element and the amount of question variants (r^2 = 0.583, p = 0.003, r^2 = 0.496, p = 0.014;). That means the longer time questions take in a teacher's talk, the more question accumulations and question variants typify the said teacher's questioning strategy. It also seems to be safe to say that there is a moderately strong positive interrelationship between the average length of the questions and the frequency of question accumulations (r^2 = 0.444, p = 0.030), namely, the longer the classroom questions are on average, the more often it happens that the teacher asks more than one question within a turn.

The strong positive correlation between the amount of whole class work and the number of classroom questions ($r^2 = 0.518$, $p = 0.010$) confirms our assumptions, which means the more the whole class work is used in the classroom, the more questions are asked by the teacher. The relation between the two strategic elements is plotted in Figure 4.

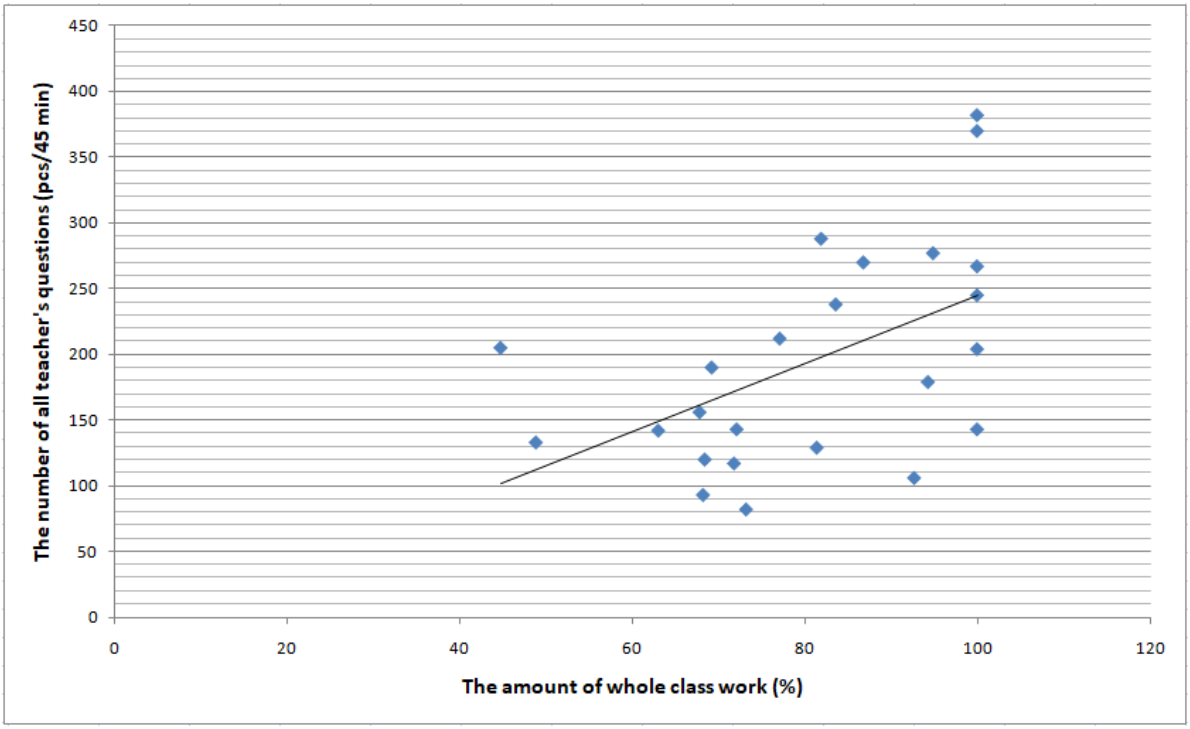

Figure 4

The correlation between the amount of whole class work (%) and the number of all teacher's questions (pcs/45 min)

The left-to-right ascension of the line indicates the positive nature of the interrelationship. If the values increase in one data group, then we can expect the same to happen in the other. The correlation studies have revealed further unsurprising findings, too. One example is the moderately strong interrelation between the following strategic elements: the amount of teacher's talk and the per cent of turns with question accumulation of all turns with interrogative content ($r^2 = 0.443$, $p = 0.030$).

It is a not a self-evident finding, however, that there is a moderately strong negative correlation between the amount of student involvement enabled by questions and the average length of teachers' questions ($r^2 = -0.499$, $p = 0.013$). It means that the longer teachers' questions are, the

lower per cent of students are encouraged by the questions to participate in the whole class work. Another result has pointed out that there is a negative correlation between the amount of turns with question accumulation and the student involvement enabled by the teacher's questions (r^2 = -0.436, p = 0.039). That is to say, the higher the ratio of turns with question accumulation compared to all teacher's turns with interrogative content is, the lower per cent of students are enabled by the teacher's questions to participate in the whole class work. Consequently, we can assume that the teacher who phrases longer than the average questions and adopts the strategy of question accumulation more frequently than the average, gives students less room to speak or express their thoughts. Another less predictable finding is the moderately strong positive interrelationship between the amount of polite forms in pending questions and the frequency of question variants (r^2 = 0.459, p = 0.024). Presumably, it is the solemnities of the classroom speech behaviour that link these two strategic elements together, which means the more question variants a teacher uses, the more liable they are to make their questions complicated or ask circuitously. The same characteristic applies to their speech and shows in the polite forms and polished introductory main clauses they frequently use. The hereby enumerated elements of questioning strategies can, of course, be supplemented by further aspects regarding the usage of questions in the classroom. Two examples could be to explore the interrelation among the types of teachers' questions and the quality, complexity and length of students' answers or to examine the correlations concerning the types, quantity and length of teachers' and students' questions.

The second study contrasted the questioning strategies in P1 and P2's all together nine lessons. It also presented the same elements observed in P3's five lessons, however, due to this teacher's professional experience, sex and the differences in the taught subjects these lessons were not compared to P1 and P2's classes. In total, eight strategic elements showed considerable difference in frequency while examining P1 and P2's lessons, therefore, the discrepancy is not a coincidence, it is rather caused by the dissimilarities in the individual characteristics of speech. We noticed one of the sharpest differences in the frequency of using question accumulations. The findings from P1's, P2's and P3's lessons are shown in Figure 5.

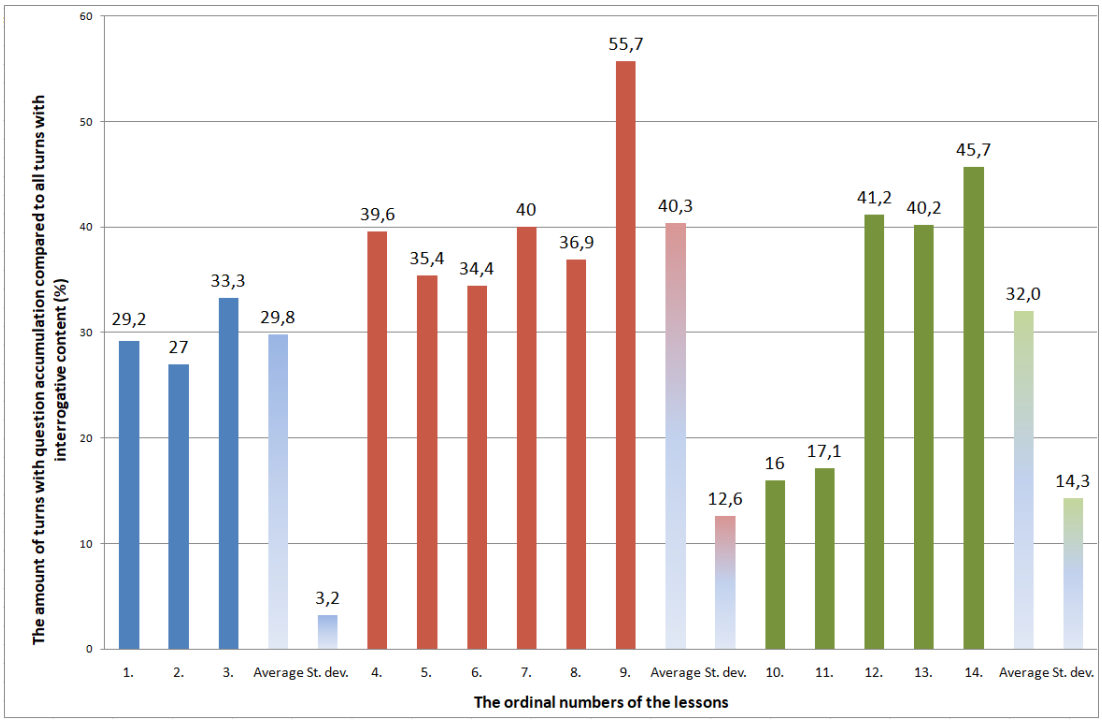

Figure 5

The amount of turns with question accumulation compared to all turns with interrogative content in P1's, P2's and P3's lessons (%)

Figure 5 distinctly shows what values belong to the same teacher. P2 asks at least two questions in nearly every other turn with interrogative content. P1 does the same already in only 29.8% of the cases while P3 in 32%. In one of P2's lessons 34.4% of the turns with interrogative content contain at least two questions before a student answers, whilst in the ninth lesson this value is considerably higher, it goes up to 55.7%. P2 does not pursue this questioning strategy to the same extent in all their classes, because even if question accumulation plays a significant role in the individual characteristics of their talk, the degree to what P2 uses it varies depending upon the topic and difficulty level of the lesson. P1 and P2 visibly use question accumulations to different degrees in their classes and this difference can be considered large (p = 0.025) based on the paired t-test. When it comes to the frequency of question accumulations used, the biggest deviations are marked during P3's five lessons. The standard deviation calculated was 14.3 which is a rather high value compared to the average.

P1 and P2 used seven more elements of questioning strategies to significantly different extents. These elements of questioning strategies are: the proportion of higher-order questions in the

questions about the curriculum, the frequency with what utterances with no interrogative function, but with interrogative form and/or intonation are used ($p = 0.014$), the average length of questions ($p = 0.049$), the amount of stand-alone questions that are not immediately followed by further questions ($p = 0.015$), the amount of information questions ($p = 0.021$), the frequency of question variants that switch the variant type ($p = 0.009$) and the frequency of full repetition variants ($p = 0.017$).

5. Methodological recommendations

One of the most important elements of the interactive phase of teaching and learning is the ability of putting questions, and this ability is possessed by teachers at different levels. To measure them I supplemented the two aspects (1. and 2.) of an earlier set of criteria (Falus, 2003) by additional strategic elements. All the criteria are measured on a scale from 1 to 3 depending on how typical they are of the teacher's questions during the examined class. The factors affecting the pedagogic efficiency of the questioning strategies and the levels at which the teacher possesses a certain ability are demonstrated in Table1.

Components of questioning strategies	**Level 1**	**Level 2**	**Level 3**
1. Formulating the questions: Stand-alone question, not immediately followed by further questions	<50% of the questions are stand-alone questions, not immediately followed by further questions.	50–70% of the questions are stand-alone questions, not immediately followed by further questions.	>70% of the questions are stand-alone questions, not immediately followed by further questions.
2. Student involvement encouraged by questions	<40% of the students participate in the class.	40–80% of the students participate in the class.	>80% of the students participate in the class.

3. The number of turns without question accumulation	No question accumulation in <50% of the turns with interrogative content.	No question accumulation in 50–70% of the turns with interrogative content.	No question accumulation in >70% of the turns with interrogative content.
4. The frequency of minimum three-second-long silences following the questions	In <5% of the cases are the questions followed by a min. three-second-long silence.	In 5–15% of the cases are the questions followed by a min. three-second-long silence.	In >15% of the cases are the questions followed by a min. three-second-long silence.
5. The thought process based division of questions about the curriculum	<10% of the classroom questions are higher-order questions.	10–40% of the classroom questions are higher-order questions.	>40% of the classroom questions are higher-order questions.

Table1

Factors affecting the pedagogic efficiency of the questioning strategies

The hereby introduced self-assessment tool provides viewpoints for the analysis of one of the major fields of teacher's communication, the questioning strategies. If the teacher records their class(es) on a video, they can analyse their questioning strategies with these methods and can get numerical, objective results about what level their strategies in class are at from the hereby introduced aspects. Furthermore, there is a possibility to visually demonstrate the results in a spider diagram that allows us to represent the values of all five components at the same time. For some of the elements of questioning strategies observed in the fourteenth lesson, see Figure 6.

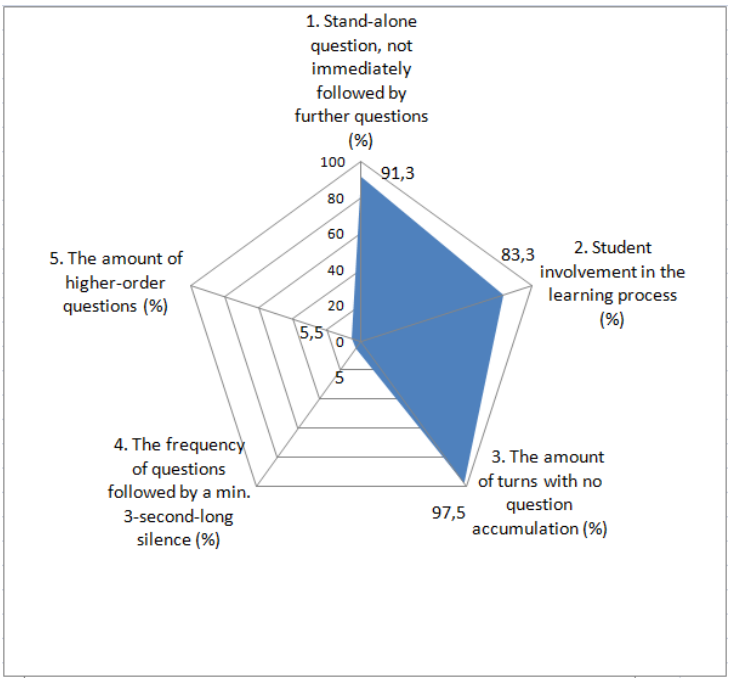

Figure 6

The teacher's questioning strategies employed in the fourteenth lesson

The five vertices of the pentagon seen in Figure 6 represent the above covered five components; the bigger the coloured section is, the higher the given element of the teacher's questioning strategies can be ranked. For instance, the teacher of the fourteenth lesson tends to ask stand-alone questions, only in 8.7% of the cases are the pending questions immediately followed by another question, which means the said teacher is at level 3 by the first criterion. Since this teacher managed to make 83.3% of the students participate in the class by asking questions, their strategy reaches level 3 by the second criterion as well. Considering that the amount of turns without question accumulation bears upon the first aspect, namely the amount of stand-alone questions, it has a high value, as expected. There are no question accumulations in 97.5% of the teacher's turns, so in this respect as well the teacher's questioning strategy can be ranked as level 3. Based on the fourth aspect – the strategy of an at least three-second-long wait after the questions – the questioning strategy used by the teacher of the fourteenth lesson is, with its value of 0.9%, at level 1. Finally, the per cent of higher-order questions in the questions about the curriculum (15.7%) sorts the teacher's questioning strategy again into level 1.

6. Conclusions

We can draw the conclusion from the results of the empirical research that there are such elements of questioning strategies that can help us model the examined teachers' questioning methods. This means that based on the nineteen strategic elements analysed in this study the teachers' questioning method can be well defined, and the individual characteristics of the teacher's talk can also be objectively demonstrated this way.

The results of the first study yield the conclusion that there are no major differences in the elements of questioning strategies in the classroom when it comes to the teachers' professional experience, sex and the age group they teach, namely what characterises the questioning strategies during the learning-teaching process does not depend on the teacher's sex, on whether they teach in primary or secondary school or on how long they have been teaching. The first study shows that out of the nineteen elements of questioning strategies analysed along these three variables only in four were there significant differences among the groups when it came to how frequently they were used. Therefore, the methodological recommendations of this dissertation and the self-assessment tool can come to teachers' aid regardless of their sex, professional experience or the taught age group, in teacher training and later on in further trainings as well.

Having examined the relations among the elements of questioning strategies and some further classroom talk components in the first research we have reason to believe that there are moderately strong or indeed strong correlations among many components of the classroom discourse. Such relations are for instance the correlation between the used whole class work and the number of classroom questions, the connection between the amount of teacher's talk and the number of questions, the interrelationship between the number of questions about the curriculum and the question variants or the negative correlation between the question accumulations and the student involvement. The findings indicate that classroom discourse has specific elements (e.g. the form of class organisation of pupils, the amount of teacher's talk in the classroom, the number of teacher's questions etc.) that greatly affect many components of the questioning strategies, presumably other communication strategies as well, elements that significantly correlate with these strategies.

After having seen the results of the second research we can draw the conclusion that teachers differ based on their questioning strategies, their classroom discourse has many individual

characteristics. Altogether eight elements of questioning strategies in the examined teachers' nine classes were used at a markedly different frequency, which means that there are numerically verifiable, statistically demonstrable individual characteristics in the usage of teachers' classroom questions. This points to the conclusion that the teachers' questioning strategies signify individual methods, paths and/or features. For example, teachers might use certain question types more often than others or the classroom questions might occur following a characteristic pattern. Along these deviations the characteristics of teachers' speech culture can be demonstrated from the angle of the usage of teachers' classroom questions.

7. Propositions

First proposition: Among the teachers participating in the first study there are no significant differences based on their sexes, professional experience and the age group they teach. Only in 7% of the examined elements of questioning strategies can we see statistically identifiable discrepancy in one of the three variables. It means that in 93% of the elements of questioning strategies the examined teachers show no contrast based upon their sex, professional experience or taught age group.

Second proposition: In 42.1% of the cases there were statistically verifiable differences in how frequently the elements of questioning strategies were used during the nine classes of the two teachers compared in the second study. This result supports the earlier assumption that teachers' discourse is mainly defined by individual characteristics (Antalné, 2006; Scheuring, 2011; Király, 2015a, 2015b, 2017), that a teacher's linguistic identity is reflected in their classroom talk (Караулов, 1987; Олешков, 2011).

Third proposition: In 94.7% of the cases less than three-second-long silences follow the questions of the teachers participating in the first research, meaning that teachers usually do not pause after asking a question. In case there is no immediate response coming from the students, they either put a new question, use a question variant or they continue their turn with a non-interrogative utterance. As for the frequency of the at least three-second-long waits following the questions this study led to the same results as former international and domestic researches (Rowe, 1986; Cotton, 1988; Antalné, 2006; Király, 2015b, 2017).

Fourth proposition: The findings of the first research confirm that after the at least three-second-long pauses following the questions the students' answers were substantially longer (3.9 sec) (p = 0.036) than during the whole class (2.5 sec). These results tally with the tendencies formulated in previous international researches and they statistically verify that by the technique of waiting at least three seconds after the questions, giving more time to think, teachers enable students to give longer answers (Rowe, 1986; Cotton, 1988).

Fifth proposition: Of the questioning strategies of teachers participating in the first research it was typical using question accumulation within the same turn or reformulating questions in the form of mostly five types of question variants. During the examined classes in 32.7% of the turns with interrogative content was there more than one question. 34.7% of the (curriculum-related or management) pending questions came in the form of a question variant.

Sixth proposition: 85.3% of the questions about curriculum in the first research were lower-order questions meaning there was only one correct answer to them. This ratio is approximately the same seen in earlier studies, namely teachers tend to ask such questions in class that one specific, right answer can be given to (Antalné, 2006; Király, 2017). These question types demand fewer higher cognitive processes from students.

Seventh proposition: During the classes examined in the first study there is a strong positive correlation between the amount of whole class work and the number of classroom questions (r^2 = 0.518, p = 0.010), namely the more the whole class work is used in the classroom, the more questions - including questions about the curriculum (r^2 = 0.479, p = 0.018) - are asked by the teacher, and the more utterances with no interrogative function, but with interrogative form and/or intonation (r^2 = 0.488, p = 0.016) occur. In the whole class work the teacher typically has the major role and leads the discourse and since the most frequently used type of teacher utterances is the question, the positive correlation between the two aspects supports the proposed hypothesis. It can be concluded that the teacher who asks more questions than the average in the classroom, also puts significantly more questions about the curriculum and addresses more utterances with no interrogative function, but with interrogative form and/or intonation to their students. As a consequence of the large number of questions about the curriculum the class is broken up into fragments, the students are guided to follow the teacher's train of thoughts.

Eighth proposition: The results of the first research have shown that the more questions are asked in the classroom, the more frequent the question accumulations are in the teacher's turn ($r^2 = 0.457$, $p = 0.025$), and the higher the ratio of more than one question in the teacher's turn, the more frequent question variants ($r^2 = 0.661$, $p = 0.000$) are. Consequently, the teacher who uses more questions than the average, also employs question accumulations and question variants in higher than the average ratio.

Ninth proposition: Based on the results obtained from the first research we can say that there is a moderately strong negative correlation between the amount of student involvement enabled by questions and the average length of teachers' questions ($r^2 = -0.499$, $p = 0.013$) and between the above mentioned strategic element and the amount of teachers' turns with question accumulation ($r^2 = -0.436$, $p = 0.039$). In other words, the longer teachers' questions are, and the more frequent teachers' turns with question accumulation are in class, the lower per cent of students are encouraged by the questions to participate in the whole class work. This means the longer than the average questions the teachers participating in the first research phrase, and the more frequently than the average they adopt the strategy of question accumulation, the less room they give students to speak or express their thoughts.

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